

What is claimed is:

1. An MRI apparatus comprising:
 - a main magnet for generating a main magnetic field in an examination region;
 - a plurality of gradient coils for generating gradient fields within the main field;
 - an RF transmit coil for transmitting RF signals into the examination region and exciting magnetic resonance in a subject disposed therein in accordance with a plurality of imaging parameters, the transmitted RF signals having a SAR associated therewith; and
 - a SAR processor for maintaining the transmitted RF signals below a prescribed SAR level.
2. An MRI apparatus as set forth in claim 1 wherein the SAR processor includes reference SAR data as a function of subject location.
3. An MRI apparatus as set forth in claim 2 wherein the SAR data is derived from an FDTD model having human body data as input.
4. An MRI apparatus as set forth in claim 1 wherein the SAR processor maintains the transmitted RF signals by adjusting the RF duty cycle or transmit B1 signal strength associated therewith.
5. An MRI method comprising the steps of:
 - generating reference SAR data as a function of subject position;
 - selecting a subject position to image;
 - generating a main magnetic field in an examination region;
 - generating gradient fields within the main magnet;
 - transmitting RF pulses into the examination region to excite magnetic resonance in a subject disposed therein, the RF pulses having SAR values associated therewith; and
 - maintaining the SAR values below prescribed SAR limits in accordance with the reference SAR data at the selected position.

6. An MRI method as set forth in claim 5 wherein the step of generating the reference SAR data includes modeling partial body SAR, whole body SAR, or local SAR as a function of subject position using a FDTD model.

7. An MRI apparatus comprising :

reference SAR means for generating reference SAR data as a function of subject position;

main magnetic field means for generating a main magnetic field in an examination region;

gradient means for generating gradient fields within the main magnet;

RF transmit means for transmitting RF pulses into the examination region to excite magnetic resonance in a subject disposed therein, the RF pulses having SAR values associated therewith; and

SAR adjusting means for maintaining the SAR values below prescribed SAR limits in accordance with the reference SAR data at the selected position.

8. An MRI apparatus as set forth in claim 7 wherein the reference SAR means includes modeling partial body SAR, or whole body SAR, or local SAR as a function of subject position using a FDTD model.